

## WHAT IS CLAIMED IS:

1. A method of improving the reception of a signal in a wireless communications  
2 device (WCD), comprising the steps of:
  - (a) estimating the velocity of the WCD; and
  - 4 (b) adjusting a filter bandwidth in the WCD in response to the estimated velocity,  
to mitigate the introduction of noise and distortion to the signal.
2. The method of claim 1, wherein step b) comprises the steps of:
  - 2 (1) increasing the filter bandwidth as the estimated velocity increases; and
  - (2) decreasing the filter bandwidth as the estimated velocity decreases.
3. The method of claim 1, wherein steps a) and b) are performed at periodically-  
2 occurring time increments.
4. The method of claim 1, wherein step (a) comprises the step of measuring a level  
2 crossing rate.
5. The method of claim 1, wherein the signal is a pilot signal.
6. The method of claim 1, wherein step (b) comprises the steps of:
  - 2 (1) providing a plurality of predetermined bandwidths, wherein each predetermined  
bandwidth corresponds to a particular velocity range; and
  - 4 (2) setting the filter bandwidth to one of the plurality of predetermined bandwidths  
that corresponds to the estimated velocity.
7. The method of claim 6, wherein step (1) includes the step of providing a plurality  
2 of filter components, wherein each filter component has a corresponding bandwidth.
8. The method of claim 6, wherein step (1) includes the step of providing a lookup  
2 table 504 that translates a velocity estimate into one or more filter parameters, wherein the  
one or more filter parameters determine the filter bandwidth.
9. A system for improving the reception of a signal in a wireless communications  
2 device (WCD), comprising:
  - a velocity estimator that generates a velocity estimate; and
  - 4 a filter having a bandwidth that is adjusted in response to velocity estimate, to  
mitigate the introduction of noise and distortion to the signal.

10. The system of claim 9, wherein said filter is adapted to increase the filter bandwidth  
2 as the estimated velocity increases, and decrease the filter bandwidth as the estimated  
velocity decreases.
11. The system of claim 9, wherein said velocity estimator measures a level crossing  
2 rate to produce a velocity estimate.
12. The system of claim 9, wherein the signal is a pilot signal.
13. The system of claim 9, wherein said filter comprises:  
2 a plurality of predetermined bandwidths, wherein each predetermined bandwidth  
corresponds to a particular velocity range; and  
4 means for setting the filter bandwidth to one of the plurality of predetermined  
bandwidths that corresponds to the estimated velocity.